

TEAM # 1

The University of Texas
at Dallas

DATE

08/01/2023



CHAINLINK RESEARCH

OWNER

Bill McBeath

PRESENTED BY

Daniel Morris, Nasif Nahian, Akash Tyagi,
Jimmy Nguyen, & Akash Navneeth

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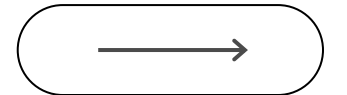
01

ABOUT

Founded in 2003 by practitioners and researchers, the company has established a reputation for pre-science, depth and quality of research, and innovative insight.

ChainLink does in depth industry specific research and has developed specific supply chain models. Conducting both primary research and secondary research.





VISION

Our vision is to foster a culture of continuous improvement, collaboration, and adaptability. Together, we strive to make a positive impact, inspire change, and become a trusted partner for our stakeholders and teammates.

MISSION

Our mission is to work collaboratively and deliver results through our combined expertise and dedication. By leveraging our diverse perspectives and skills, we aim to solve complex problems and achieve shared goals. Committed to making a lasting impact and leaving a positive legacy in our field.

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PROJECT LEAD
Jimmy Nguyen



PROJECT CO-LEAD
Akash "Naveen" Navneeth



SECURITY LEAD
Daniel Morris



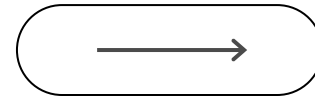
SECURITY MEMBER
Nasif Nahian



SECURITY MEMBER
Akash Tyagi

OUR TEAM

04



The primary objectives of the project were to enhance web security and user experiences across devices through effective security measures and responsive design techniques.

To achieve these project objectives, we conducted a thorough security analysis, implemented security measures, and utilized the principles of responsive design to enhance the website.

EXECUTIVE - SUMMARY

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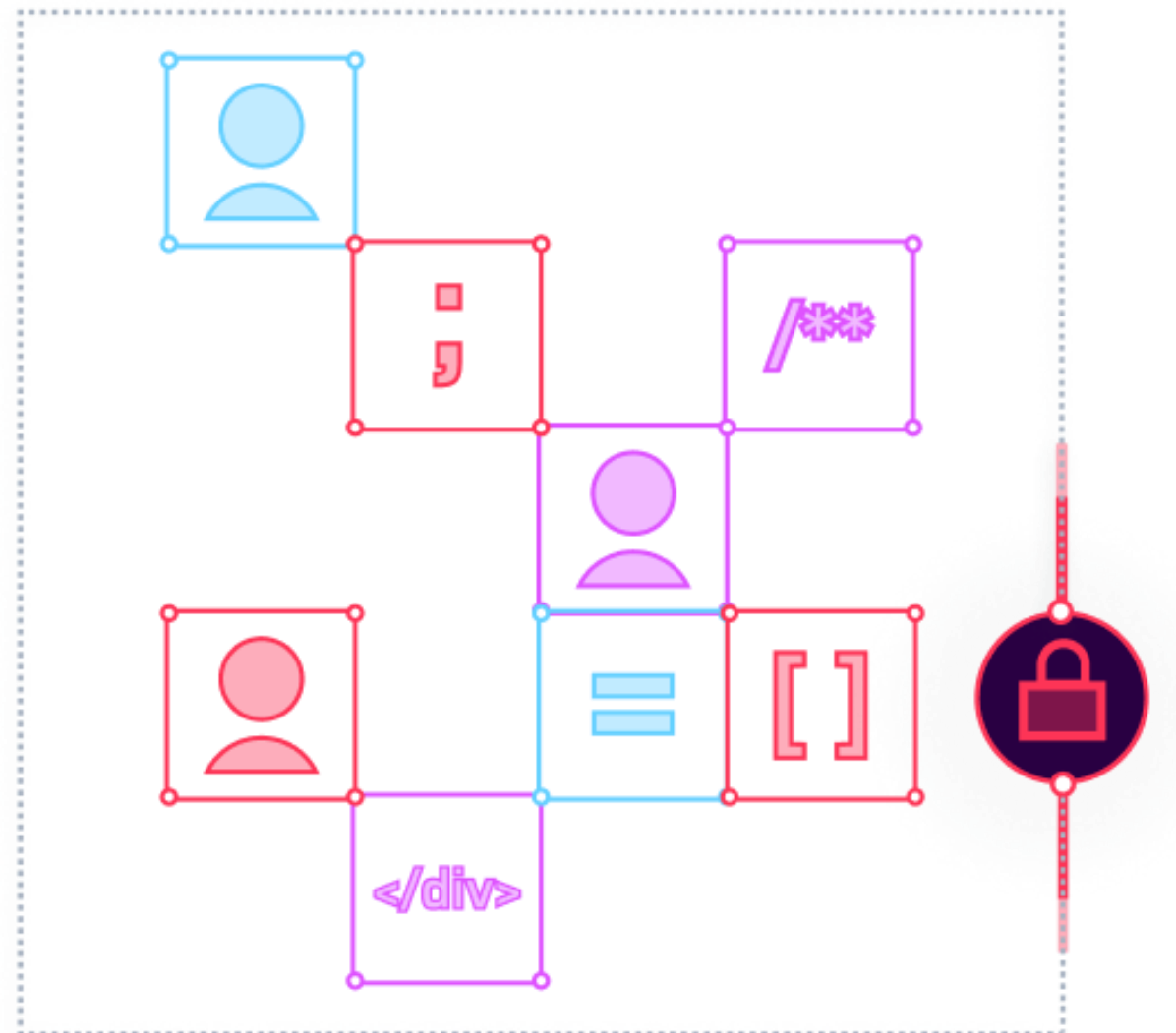
OUR GOAL



- Help ChainLink create a more secure and stable platform by using WordPress as the current foundation
- Improving the user experience in order to reduce friction between website and mobile applications
- Our goal is to do our due diligence and meet the standards of our peers and our sponsor. We will do our best and complete all expected deliverables.

"If we want users to like our software. We should design it to behave like a likeable person; respectful, generous and helpful"
-Alan Cooper

PROBLEM



- Clean up images.
- Security assessment, vulnerability assessment, make and implement recommendations.
 - Research security practices.
 - Review ChainLink website to determine actions needed
 - Create a set of recommendations
 - Review and determine recommendations to implement
 - Implement prioritized recommendations
 - Conduct penetration testing and other types of security testing to find vulnerabilities
 - Fix vulnerabilities
- Define and execute QA tests.
 - Assess possibility for automated testing, and implement if feasible.
- Fix bugs, fix parking lot issues, implement parking lot enhancements
- Accessibility assessment and recommendations
- SEO - make recommendations and implement
- Performance testing and improvements
- Responsive design
- Setup user commenting on articles

SOLUTION

Subject Tasks Into Manageable Parts:

- **Why?**
 - Limited time to complete project
 - Individuals have other commitments
 - A single task will take the entire semester to complete
- **Priority:**
 - Responsive Design
 - Security
 - Experience with developing security measures
 - Eagerness to learn and develop measures for ChainLink



Progression/ Documentation

- Progress is documented through a designated database
- Recommendations needed to be thoroughly researched and were presented to ChainLink to ensure that it aligns with project needs
- etc.

COMMUNICATION

MEETINGS

- Weekly meeting with project manager and team members
- Ensure constructive feedback
- GroupMe/ Emails/ MS Teams/ Zoom
- Tracking weekly progression

DEVELOPMENT

Work and Collaboration

- Responsive Design Team
 - Jimmy Nguyen, Akash Navneeth
- Security Team
 - Daniel Morris, Nasif Nahian, Akash Tyagi
- Worked more as two independent groups pertaining to the two categories, while still communicating as a team on assessments and issues

Implementation

- Discussed as a team
- Recommendations and implications must be verified

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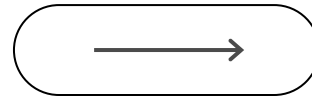
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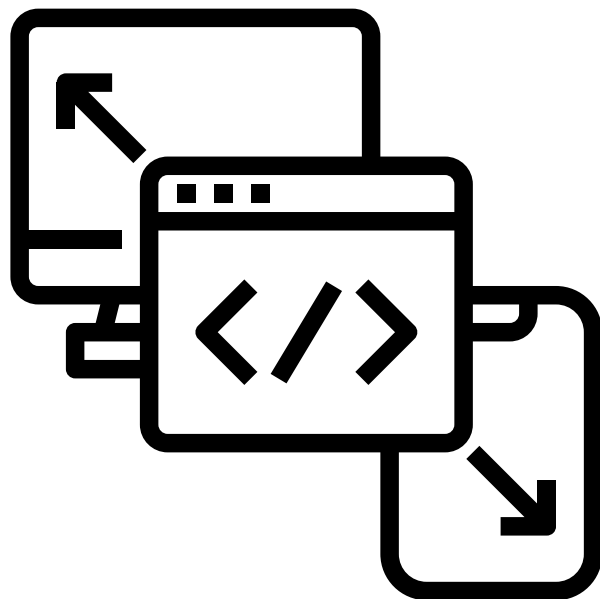
DISCUSSION/ ASSEMBLY



09



RESPONSIVE DESIGN



What is Responsive Design?

- An approach that addresses the range of devices and device sizes, enabling automatic adaption to the screen to ensure usability and satisfaction

What did we tackle?

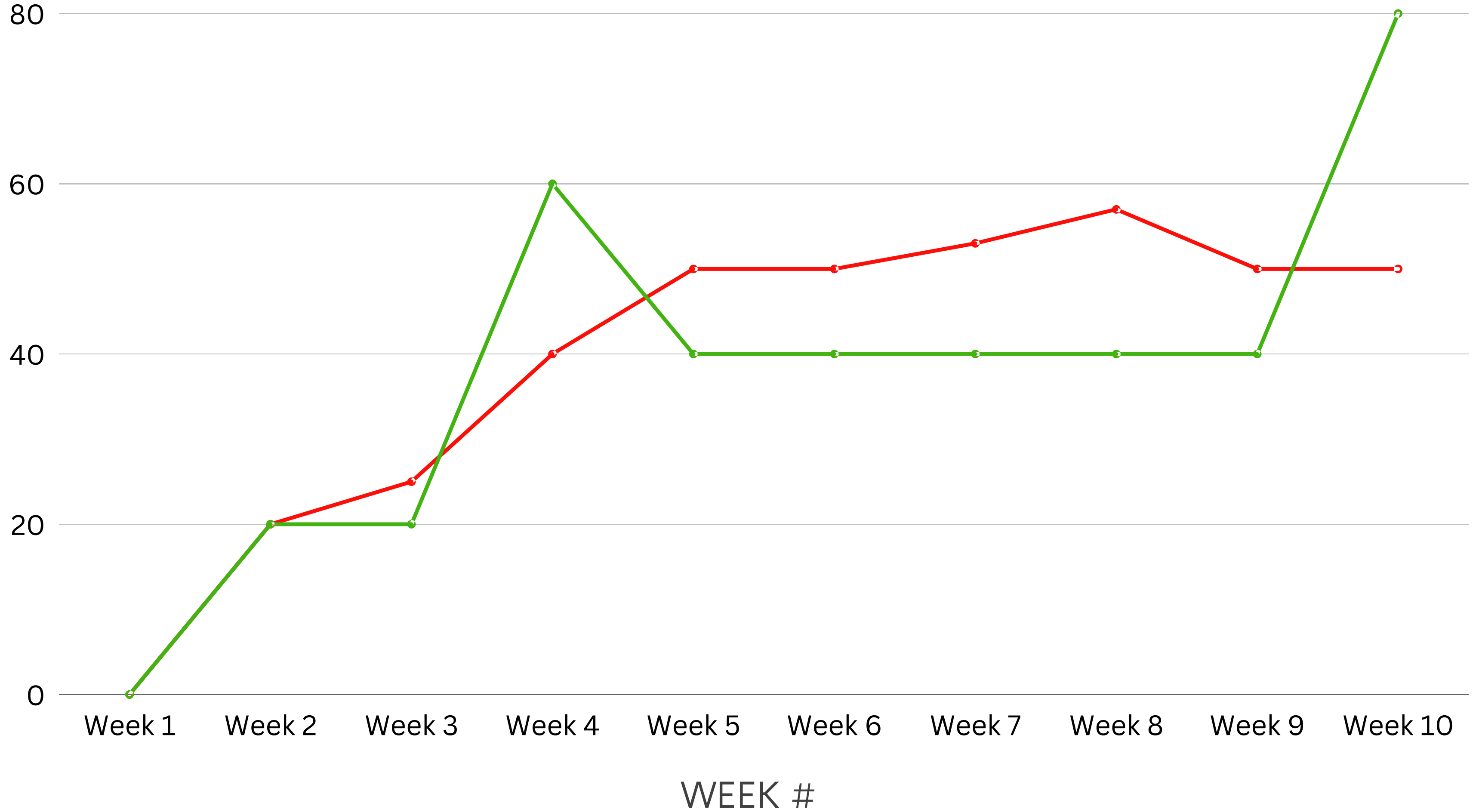
- Ensure that images rendered correctly and is visible to different types of displays
- Display and alignment of content is consistent
- Render text legibly on all scales
- Keep content within their containers
- Display and resize images as needed

What we couldn't solve...

- Tables created by WordPress made it difficult to format, when it came to smaller displays
 - Requires a more technical approach through CSS and HTML

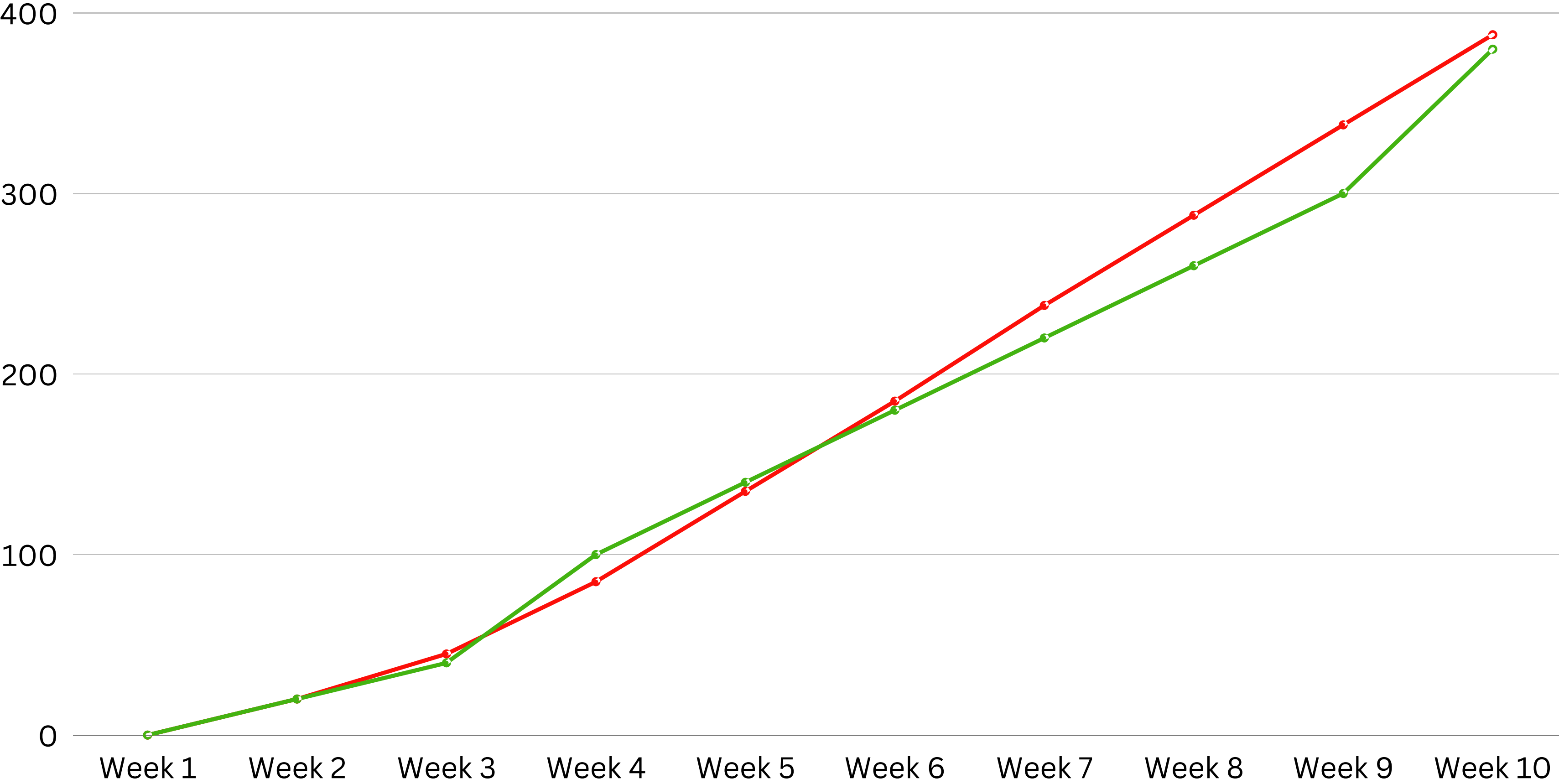
WEEKLY RESPONSIVE DESIGN ARTICLES COMPLETED

NUMBER OF ARTICLES COMPLETED



RESPONSIVE DESIGN ARTICLES FIXED OVER TIME

NUMBER OF ARTICLES COMPLETED



WEEK #

77% of adults have smart-phones

1



2

74% of people believe websites should load no more than 2 seconds

69% of users are online multiple times a day

3



4

75% of people between 18 - 49 are online constantly

72% of users want mobile friendly websites.
79% would leave the site if it was not friendly

5

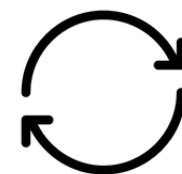


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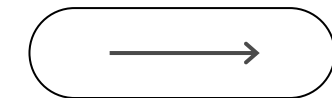
39% of users spend time on a desktop/ laptop and 61% of users on mobile

74% of users will return to a website, if it is properly optimized

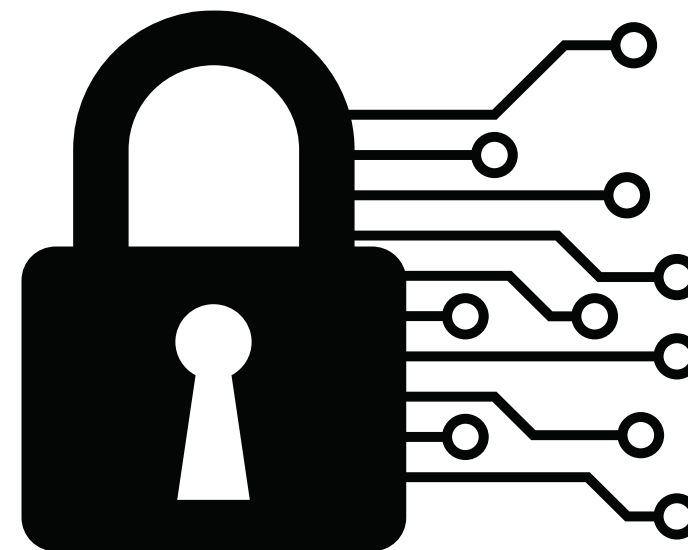
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SECURITY



Why is security so important?

- Prevents hackers and cyber-thieves from accessing sensitive information
- Without a security strategy, it would risk the spread of malware, attacks on the website, networks, and other IT infrastructures that were created.

Our Recommendations

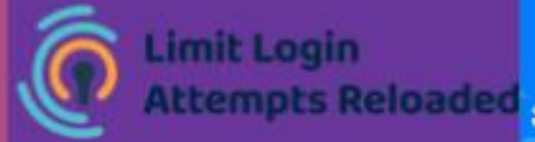
- MFA
- Site Backup
- Limiting Login Attempts
- ETC.

CYBERSECURITY WITH CHAINLINK RESEARCH

Multi-Factor Authentication (MFA)



Multi-Factor Authentication



Limit Login Attempts



Unique login URL



Auto Updates



Admin Account Policies

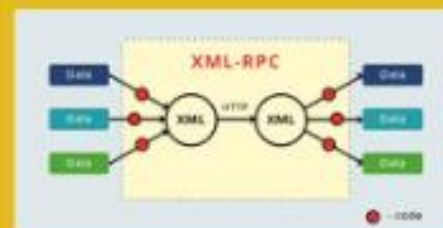


Disaster
Recovery
Plan



Site
Backups

Plug-in Audit

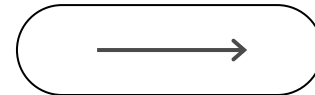


Disable XML-RPC

Delete default
readme.html



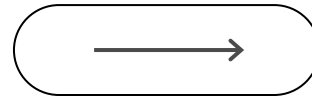
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CYBER SECURITY

- Enabled Auto updates
- Audited Word Press Plug-ins
- Disaster Recover plan - Steps for recovery actions
- Change default admin site URL

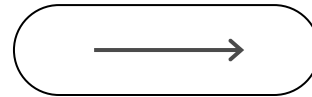
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CONTINUED...

- Utilized WordPress plugins and settings
- User testing
- Auto Logout Activity
- Limit account login attempts

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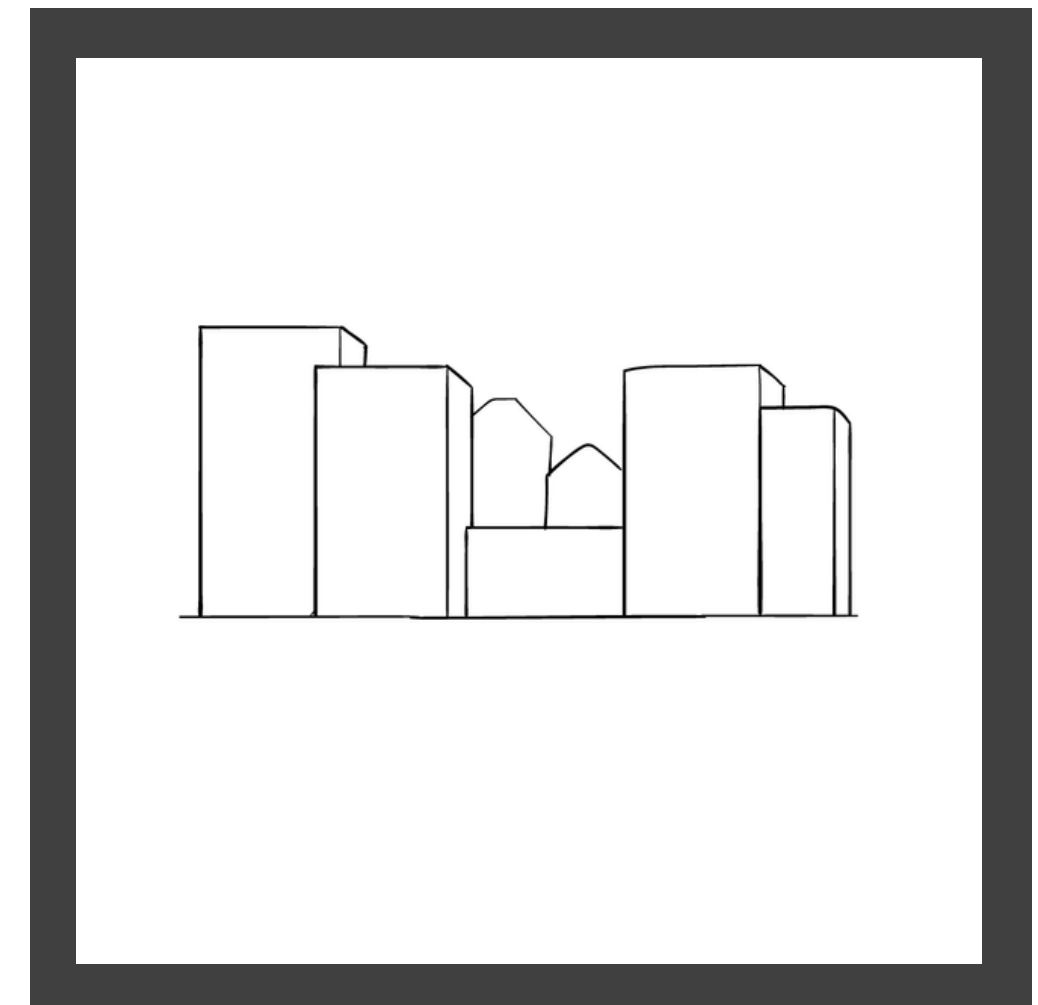
CONTINUED...

- Enabling MFA for admin site
- User testing
- Prepare Disaster Scenario
- Propose potential solutions

IMPACT

What we hope to leave behind

- Provide ChainLink a more stable platform that allows users a smoother experience
- Ensuring that ChainLink is more secure
- Measures taken to secure a website from cyberattacks
- Ensures that users can access and interact ChainLink's website easily and comfortably, regardless of the device they use



REFLECTION



What this project means for us

- A chance to develop our own individual skill sets
- Grateful to ChainLink for providing us an opportunity
- Insight to a technical field that would carry on to our future careers

What we got out of it

- Experience in a professional work environment
- Working in a collaborative environment that allowed us to develop stronger communication skills and teamwork
- Developing new skills in the technical industry

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QUESTIONS?

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